

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	7	(US-6300164-\$ or US-7053491-\$ or US-6781065-\$ or US-6337445-\$ or US-6610591-\$ or US-5971253-\$ or US-6818988-\$).did.	USPAT	OR	OFF	2006/11/29 12:49
L3	2548	257/738,772.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/29 14:04
L4	45758	(solder near2 (ball or bump or sphere))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 14:05
L5	11951	L4 and ((inner or internal or interior or inside or central) with (core or part or region or section or shell or jacket or cover or layer))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 14:05
L6	3025	L5 and ((solder near2 (ball or bump or sphere)) same ((inner or internal or interior or inside or central) with (core or part or region or section or shell or jacket or cover or layer)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 14:05
L7	5844	438/612-616.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/29 14:05
L8	13476	438/106-127.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/29 14:06
L9	5424	L8 and (ball or spher\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 14:06

## EAST Search History

L10	1861	3 not (6 or 7 or 9)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/29 14:07
L11	5	((("20020047216") or ("20020071961") or ("6337445") or ("20020051728") or ("20020046627") or ("6183545") or ("20050260430")).PN.	US-PGPUB	OR	OFF	2006/11/29 14:45
L12	10	(US-20050205993-\$ or US-20040222523-\$).did. or (US-7053491-\$ or US-6940168-\$ or US-6720665-\$ or US-6580168-\$ or US-6518667-\$ or US-6504241-\$ or US-6333554-\$ or US-6028366-\$). did.	US-PGPUB; USPAT	OR	OFF	2006/11/29 14:49
L13	2	("20030052409").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/29 14:50
L14	5	((("20030052409") or ("6734568") or ("6404051") or ("20050098891") or ("20040201097")).PN.	US-PGPUB; USPAT	OR	OFF	2006/11/29 14:50
L15	16	("20010015495"   "20020041036"   "3303393"   "5801446"   "5841198"   "5931371"   "6002168"   "6087597"   "6184062"   "6271111"   "6283359"   "6300578"   "6303408"   "6324754"   "6465747").PN. OR ("7053491"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/29 14:53
L16	30	("3148310"   "4987100"   "5048744"   "5203075"   "5261155"   "5303862"   "5401911"   "5448114"   "5844316").PN. OR ("6087597"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/29 14:57
L17	7	("6037065"   "6130959"   "6136689"   "6158644"   "6165806"   "6313532").PN. OR ("6518667"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/29 15:09
L18	7	("4097266"   "5508228"   "5633204"   "5707902").PN. OR ("6333554"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/29 15:11
L19	38	("2815729"   "3303393"   "3703254").PN. OR ("4097266"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/29 15:12

## EAST Search History

L20	5	(US-5573859-\$ or US-6518667-\$ or US-4097266-\$ or US-6087597-\$ or US-5841198-\$).did.	USPAT	OR	OFF	2006/11/29 15:16
L21	9	(US-7053491-\$ or US-6781065-\$ or US-6610591-\$ or US-5971253-\$ or US-6300164-\$ or US-6337445-\$ or US-6518667-\$ or US-5573859-\$ or US-4097266-\$).did.	USPAT	OR	OFF	2006/11/29 15:22
L22	1	("20060055054").PN.	US-PGPUB	OR	OFF	2006/11/29 17:39
L23	235794	sulfonic with acid	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 17:39
L24	166310	sulfonic with acid	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/29 17:39
L25	328980	(electroplat\$4 or electro-plat\$4 or plating or electrolessplat\$4 or electroless-plat\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 17:42
L26	27759	25 and (sulfonic or sulfuric or sulphuric or sulphonic)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 17:43
L27	228	26 and (organosulfate or organosulphate or (organic near2 (sulfate or sulphate)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 17:44
L28	166	27 and (ammoni\$4 or NH3 or NH4 or (N?adjHsub\$))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 17:46

## EAST Search History

L29	75	28 and ((Ag or silver or Ag?) and (Sn or Sn? or tin))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 17:47
L30	5	29 and (phosphine or PH3 or (P?adjH?sub?))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 17:51
L31	0	29 and (organophosphine)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 17:52
L32	867	organophosphine	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 17:52
S1	45723	(solder near2 (ball or bump or sphere))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/27 18:05
S2	11939	S1 and ((inner or internal or interior or inside or central) with (core or part or region or section or shell or jacket or cover or layer))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/27 19:20
S3	3023	S2 and ((solder near2 (ball or bump or sphere)) same ((inner or internal or interior or inside or central) with (core or part or region or section or shell or jacket or cover or layer)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 14:05
S4	1326	S3 and (plating or electroplat\$4 or electro-plat\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/27 18:57

## EAST Search History

S5	788	S4 and reflow\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/27 18:07
S6	39	("20030119299"   "2934685"   "3496428"   "3809625"   "3986255"   "4600600"   "5334857"   "5400950"   "5431328"   "5461261"   "5468995"   "5477087"   "5506756"   "5640052"   "5736790"   "5808853"   "5841198"   "5861324"   "5885849"   "5903058"   "5956235"   "5971253"   "5989937"   "6002168"   "6120885"   "6219911"   "6281038"   "6281450"   "6283359"   "6300164"   "6337445"   "6358630"   "6365500"   "6379982"   "6472594"   "6610591").PN. OR ("6906417"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/27 18:31
S7	9	("2934685").URPN.	USPAT	OR	OFF	2006/11/27 18:33
S8	9	("2934685").URPN.	USPAT	OR	OFF	2006/11/27 18:34
S9	30	("2934685"   "3496428"   "3809625"   "4600600"   "5334857"   "5461261"   "5468995"   "5506756"   "5640052").PN. OR ("5841198"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/27 18:35
S10	12	("4260429"   "4283591"   "5084107"   "5151373"   "5181968"   "5428249"   "5474621").PN. OR ("5861324").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/27 18:37
S11	84	("3303393"   "3797103"   "3871015"   "4606962"   "4788767"   "4797103"   "4818728"   "4857482"   "4937006"   "5065227"   "5070297"   "5090609"   "5093986"   "5103290"   "5115964"   "5133495"   "5135890"   "5148265"   "5148266"   "5154341"   "5233504"   "5272376"   "5300340"   "5316787"   "5347159"   "5360988"   "5376584"   "5394490"   "5448114"   "5666270").PN. OR ("5885849").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/27 18:39
S12	20	("4064623"   "4413308"   "4811165"   "5060844"   "5244142"   "5329423"   "5431328"   "5790377").PN. OR ("5956235"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/27 18:40

## EAST Search History

S13	29	("5431328"   "5868304"   "5956235").PN. OR ("6337445"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/27 18:41
S14	61	("4001870"   "4365264"   "4538105"   "4618878"   "4695870"   "4716049"   "4792532"   "4813129"   "4902606"   "4994735"   "5020219"   "5070297"   "5072520"   "5103557"   "5120665"   "5135890"   "5148265"   "5148266"   "5153507"   "5180311"   "5321583"   "5393697"   "5430329"   "5431328"   "5440241"   "5455390"   "5578527"   "5604380"   "5666270"   "5679977"   "5749997").PN. OR ("5971253"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/27 18:46
S15	51	("3839727"   "4701482"   "5060844"   "5062896"   "5134460"   "5137845"   "5147084"   "5237130"   "5241133"   "5258577"   "5328087"   "5355283"   "5367765"   "5420460"   "5445308"   "5459287"   "5591941"   "5604379"   "5611140"   "5634268"   "5672400"   "5672913"   "5681647"   "5714252"   "5729896"   "5761048"   "5762259"   "5783461"   "5796591"   "5813870"   "5844168"   "5861322"   "5864470"   "5868304"   "5872051"   "5879530"   "5918113"   "5943212"   "5953589"   "5958590"   "5985043"   "5985456"   "6017634"   "6059992"   "6114413"   "6120885").PN. OR ("6300164"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/27 18:52
S16	538	S4 not S5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/27 18:52
S17	1697	S3 not S4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/27 18:57

## EAST Search History

S18	2232	438/614.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/27 19:20
S19	2171	S18 not S3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/27 19:20
S20	542	S19 and ball	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 11:50
S21	45758	(solder near2 (ball or bump or sphere))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 13:58
S22	11951	S21 and ((inner or internal or interior or inside or central) with (core or part or region or section or shell or jacket or cover or layer))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 13:35
S23	3025	S22 and ((solder near2 (ball or bump or sphere)) same ((inner or internal or interior or inside or central) with (core or part or region or section or shell or jacket or cover or layer)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 11:50
S24	2232	438/614.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 11:50
S25	2171	S24 not S23	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 12:41

## EAST Search History

S26	542	S25 and ball	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 12:08
S27	1629	S25 not S26	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 12:42
S28	5844	438/612-616.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/29 14:05
S29	3440	S28 not (S23 or S24)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 12:43
S30	1360	S29 and ball	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 12:51
S31	2080	S29 not S30	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 12:43
S32	456	S31 and solder	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 13:24
S33	1624	S31 not S32	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 13:30



## EAST Search History

S34	1355	S29 and ball	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 12:51
S35	537	S31 not S32	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 13:33
S36	13476	438/106-127.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 13:34
S37	5424	S36 and (ball or spher\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/29 14:06
S38	4299	S37 not (S23 or S28)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 13:35
S39	4283	S37 not (S23 or S28)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 13:35
S40	1438	S39 and ((inner or internal or interior or inside or central) with (core or part or region or section or shell or jacket or cover or layer))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 13:58
S41	2861	S38 not S40	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 13:58

## EAST Search History

S42	2399	S41 and solder	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 13:58
S43	2010	S41 and (solder near2 (ball or bump or sphere))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 14:21
S44	389	S42 not S43	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 14:21

## EAST Search History

S45	100	(US-20060226545-\$ or US-20060181298-\$ or US-20060175702-\$ or US-20060113681-\$ or US-20060189116-\$ or US-20050224560-\$ or US-20040197979-\$ or US-20040178481-\$ or US-20030060066-\$ or US-20040231886-\$ or US-20020105076-\$ or US-20030119299-\$ or US-20030024733-\$ or US-20020151164-\$ or US-20020047216-\$ or US-20020029902-\$ or US-20050133900-\$ or US-20060071330-\$ or US-20010011675-\$ or US-20060194424-\$ or US-20060189118-\$ or US-20060009023-\$ or US-20020100610-\$ or US-20060246706-\$ or US-20060115974-\$ or US-20060094223-\$).did. or (US-20060051900-\$ or US-20040262778-\$ or US-20020132462-\$ or US-20050221598-\$ or US-20060051895-\$ or US-20050082684-\$ or US-20040234763-\$ or US-20050167799-\$).did. or (US-7067172-\$ or US-7132744-\$ or US-7015590-\$ or US-6982863-\$ or US-6906417-\$ or US-6893952-\$ or US-6793116-\$ or US-6610591-\$ or US-6283359-\$ or US-6472594-\$ or US-6358630-\$ or US-6337445-\$ or US-6281038-\$ or US-6120885-\$ or US-5971253-\$ or US-5956235-\$ or US-5841198-\$ or US-3986255-\$ or US-2934685-\$ or US-7053491-\$ or US-6365500-\$ or US-6300164-\$ or US-5861324-\$ or US-3809625-\$ or US-6849953-\$ or US-6303408-\$). did. or (US-6921715-\$ or US-6781065-\$ or US-6906427-\$ or US-5761048-\$ or US-7098540-\$ or US-7126164-\$ or US-6831354-\$ or US-6818090-\$ or US-7122460-\$ or US-6939790-\$ or US-6271111-\$ or US-6127731-\$ or US-7122459-\$ or US-7119002-\$ or US-7101782-\$ or US-7037819-\$ or US-6756184-\$ or US-6133135-\$ or US-7049705-\$ or US-6372549-\$ or US-5091319-\$ or US-7100061-\$ or US-6756253-\$ or	US-PGPUB; USPAT; USOCR; JPO; DERWENT	OR	OFF	2006/11/28 14:31
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## EAST Search History

S46	9	S45 and (solder with (water or H2O or (H?sub2adjO?) or humid\$5 or moist\$5))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 14:39
S47	34	S45 and (water or H2O or (H?sub2adjO?) or humid\$5 or moist\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 14:40
S48	34	S45 and (water or H2O or (H?sub2adjO?) or (Hsub2 adj O) or humid\$5 or moist\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 14:41
S49	50	S45 and (water or H2O or (H?sub2adjO?) or (Hsub2 adj O) or humid\$5 or moist\$5 or wet)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 14:41
S50	41	S49 not S46	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 14:41
S51	5	(US-20050224560-\$).did. or (US-6781065-\$ or US-5761048-\$ or US-6096578-\$ or US-6610591-\$). did.	US-PGPUB; USPAT	OR	OFF	2006/11/28 15:03
S52	95	S45 not S51	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 15:25
S53	40	S52 and ((Ag? or Ag or silver) and (Sn or Sn? or tin))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/28 15:55

## EAST Search History

S54	55	S52 not S53	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 15:59
S55	8	(US-6893952-\$ or US-6337445-\$ or US-5971253-\$ or US-7053491-\$ or US-6300164-\$ or US-6906427-\$ or US-7037819-\$).did. or (JP-06120230-\$).did.	USPAT; . JPO	OR	OFF	2006/11/28 17:25
S56	5	(US-20050224560-\$).did. or (US-6610591-\$ or US-6781065-\$ or US-5761048-\$ or US-6096578-\$). did.	US-PGPUB; USPAT	OR	OFF	2006/11/28 16:09
S57	2	("6818988").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/11/28 17:25
S58	9	(US-6818988-\$ or US-6893952-\$ or US-6337445-\$ or US-6300164-\$ or US-5971253-\$ or US-7053491-\$ or US-6781065-\$ or US-6610591-\$ or US-5761048-\$).did.	USPAT	OR	OFF	2006/11/28 17:34
S59	1	("20060055054").PN.	US-PGPUB	OR	OFF	2006/11/29 15:38